BRITISH COLUMBIA

BC STATS Infoline

Issue: **00-10** **7** Pages
March 10, 2000

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highlights

a weekly digest of recently released British Columbia statistics

Labour Force

- **British Columbia's unemployment rate fell to 7.0% (seasonally adjusted) in February, down from 7.3% in the previous month.** The latest decline brought the jobless rate to its lowest level since 1981. Employment grew by 14,500, more than enough to absorb a 0.5% increase in the labour force.

  Nationally, both employment (+0.2%) and the labour force (+0.2%) expanded, leaving the jobless rate unchanged at 6.8%. It dipped below the five percent mark in both Saskatchewan (4.6%) and Alberta (4.9%). PEI (-1.0 points, to 11.5%) was the only other province where the unemployment rate fell in February. It was flat or rose only marginally in most other parts of the country. *Source: Statistics Canada*

- **Both part-time (+1.8%, seasonally adjusted) and full-time (+0.5%) employment in the province increased in February.** Most of the full-time jobs went to males, while women accounted for almost all of the increase in part-time employment.

  The unemployment rate for women edged up to 6.9% in February, as the number of women in the labour force rose faster (+0.8%) than the number of jobs (+0.7%). The male unemployment rate dropped 0.4 points, to 7.2%. Self-employment in the province increased 1.1% to 401,300 in February. *Source: Statistics Canada*

- **The unemployment rate fell in every region of the province except Thompson/Okanagan (9.5%, 3-month moving average), where it was unchanged from February 1999.** Rates ranged from 5.6% in Northeast to 10.1% in Kootenay, the only region with a double-digit jobless rate. The unemployment rate was 6.8% in Lower Mainland/Southwest. In Vancouver Island/Coast, it was 8.0%, but people living in the Victoria area (6.2%) were much less likely to be unemployed than those located in the rest of the region.

  Employment rose in every region, with the strongest gains seen in Vancouver Island/Coast (+7.6%), North Coast/Nechako (+6.9%) and Cariboo (+5.5%). *Source: Statistics Canada*

The Economy

- **Department store sales in BC and the north continued to decline in January, falling to 2.7% below the level in the same month of last year.** The drop in sales was the third in as many months. Canadian sales were up 2.1%. Although they remain above 1999 levels, Canadian sales have been slowing in recent months, partly due to the demise of the Eaton's chain. *Source: Statistics Canada*

- **Canadian industries operated at 86.8% of their full productive capacity in the fourth quarter of last year, matching the peak capacity utilization rate reached during the economic expansion of 1987-88.** The capacity utilization rate was up for the fifth straight quarter. Logging and forestry, construction and eight of the 22 manufacturing industries were operating at 90% or more of their full potential in the fourth quarter.

  High capacity usage rates are traditionally seen as harbingers of inflationary pressures in the economy. However, Canadian firms have been investing heavily in plant and equipment, and some of the pressures on production facilities will likely be relieved as the new capacity comes on-stream. *Source: Statistics Canada*

- **BC municipalities issued building permits for $442 million (seasonally adjusted) of planned construction activity in January.** This was 7.4%

Report — The lifecycle of high-tech firms

Did you know...

Eight out of ten kids in kindergarten almost always look forward to going to school, but by the time they've been there for a few years, the prospect becomes less appealing. Only two out of three sixth graders are almost always happy to be in the classroom.

more than in the previous month. The increase came from the non-residential sector (+43.8%), where permits for both industrial (+44.5%) and commercial (+59.6%) construction projects were up sharply. Construction intentions in the institutional and government sector rose more moderately (+7.8%). However, residential permits were down 17.6% in January, largely due to a drop in the value of planned multi-family projects.

Canadian permits fell 5.5% in January, as both residential (-2.3%) and non-residential (-9.1%) permits declined. There were wide variations among the regions. Permits were down or flat in six regions, including Ontario where they fell 18.1%. At the same time, the value of permits issued rose significantly in Manitoba (+49.5%), Yukon (+29.0%), PEI (+25.0%) and Alberta (+24.7%). *Source: Statistics Canada*

Housing

- **Housing starts in the province bounced back from a slump at the beginning of the year, rising 48.7% in February (seasonally adjusted) after falling sharply (-38.3%) in the previous month.** Canadian starts also regained momentum (+11.9%), increasing to their highest level since June 1994. Newfoundland (+62.5%), Ontario (+22.9%), BC and Quebec (+11.6%) all made solid gains. Housing starts were down in the prairies and two of the four Atlantic provinces.
  Source: Canada Mortgage and Housing Corporation

- **The cost of new housing in BC continued to decline in January.** The new housing price index (NHPI) in Victoria fell to 6.1% below the January 1999 level, while Vancouver's NHPI dropped 1.5% during the same period. Sudbury/Thunder Bay (-1.1%) was the only other area where new housing prices were lower than at the beginning of 1999. Overall, the Canadian NHPI was up 1.7%, led by increases of 4.4% in both Ottawa-Hull and St. Catharines-Niagara. *Source: Statistics Canada*

Gambling

- **British Columbians spent $430 million on government-run gaming activities in 1998, an average of $140 per capita, $15 less than in 1992.** BC government coffers received $395 million in gaming revenues in 1998.

BC was the only province where per capita spending on lotteries, casinos and VLTs fell between 1992 and 1998. This was largely because BC was one of only two jurisdictions (the other being Yukon/NWT) where non-charity casinos and VLTs were not operating in 1998. Nationally, per capita spending on government-run games of chance more than doubled between 1992 and 1998, rising from $130 to $320. Apart from BC and the North ($90 per adult), average spending on games of chance ranged from $280 per adult in PEI to $445 in Manitoba in 1997. Provincial/territorial government revenues from lotteries, casinos and VLTs totalled $4.5 billion in 1998, up from $1.7 billion in 1992. These figures do not include spending on or revenues from charitable gaming. *Source: SC, Catalogue 75-001-XPE Spring 2000*

Small Businesses

- **The average gross revenue of small businesses in BC (those with revenues between $30,000 and $5 million) was $351,800 in 1997.** Expenses for these businesses totalled $334,600, giving them a profit margin of 4.9%. Purchases of goods for resale ($138,300) and wages, salaries and benefits ($86,900) accounted for nearly two-thirds of total spending by a typical small business in the province. These businesses employed an average of 3.3 paid workers in 1997.

  Small businesses in Alberta earned less than those in other parts of the country (average revenues of $336,800 were lower than in every region except Yukon, at $322,100), but they had the highest profit rate in the country (7.1% of revenues). Small businesses in Newfoundland (2.6%) and NWT (3.0%) were the least profitable. Seventy-one percent of Canadian small businesses made a profit in 1997. *Source: SC, The Daily*

highlights, Issue 00-10
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For data originating from Statistics Canada: data sourced to 'Statistics Canada' has been retrieved from CANSIM, the agency's electronic database; otherwise the source is identified as 'SC' plus the publication name or catalogue number.

March 10, 2000

Infoline Report: The Lifecycle of High Technology Firms, 1991-95

Contact: Steve Miller / (250) 387-0365

Originally published in the January 2000 issue, *Business Indicators*. Annual subscription: $60 + GST

Highlights

- Growth in the number of firms in the high technology sector (17.4%) exceeded the provincial rate (9.7%), due in part to relatively low exit rates.
- In high tech, BC's exit rates are among the highest in Canada, while entry rates are average.
- High tech firms have better survival rates than firms in other sectors.
- New firms were responsible for all the net employment growth in the high technology sector between 1991 and 1995.

Introduction

Technology has been changing rapidly for over a century. It is clear that entrepreneurs have continually seized the opportunities from this change, opening avenues for new businesses and industries, and driving growth. Despite this, growth is not automatic and there are limitations as to how fast it can occur. Limitations of growth can stem from barriers to entry or from factors that cause firms to go out of business prematurely. Barriers can be manifested in many forms. These include some government policies, market conditions, availability of financing, training levels of entrepreneurs, availability of skilled labour, and even the pace at which society is able to keep up with and accept technological change.

This issue of Business Indicators examines the pattern of business births and deaths in the high technology sector. Analysis of the firm lifecycle, or "business demographics", can suggest whether or not there are barriers to growth. For high technology it begins by asking the questions:

1. Are new firms being formed more or less quickly in high technology than in other sectors or jurisdictions?
2. Are high technology firms going out of business more or less quickly than those in other sectors or jurisdictions?
3. What is the life expectancy of a firm in the high technology sector?
4. Is growth in high technology employment due to expansion of existing firms, or to new business startups?

The answers to these questions are developed from Revenue Canada taxation records for successive years.[1] Employer firms in each industry sector are identified in a start year, and then traced in each subsequent year. Once the record for a firm is located, payroll information is extracted, and from this full year equivalent employment is estimated. Initial work covered the time period 1991 to 1995, and is the basis of results reported here. However, some updated indicators have recently been developed at BC STATS. These will be reported in a later edition of Business Indicators.

Births, Deaths, and Growth

The BC economy was volatile between 1991 and 1995, with an average annual firm entry rate of 16.9 per cent and an exit rate of 14.6 per cent. Since entries exceeded exits, the net result was an increase in the number of firms that made up the total economy. By comparison, the high technology sector over the same period had a slightly lower entry rate (15.9 per cent), and a disproportionately lower exit rate (12.0 per cent). That is, while there was a lower rate of firms entering the high technology sector than other sectors, a greater proportion of high technology firms remained in operation.

[1] A database linking records of firms from 1991 to 1995 has been created by Statistics Canada.

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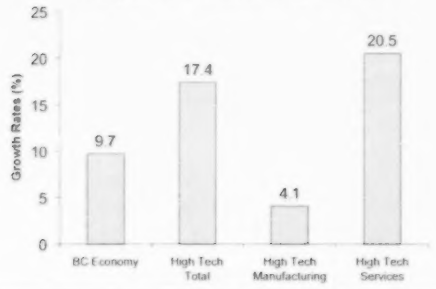
Figure 1. High Tech Firm Growth Outpaces the Economy Overall



Consequently, growth in the number of firms in the high technology sector exceeded the provincial rate. Figure 1 shows the high technology and overall provincial growth rates in the number of firms for the years covered by the study.

From 1991 to 1995 the high technology sector expanded by 17.4 per cent (driven by a 20.5 per cent growth in high technology service firms), while the number of firms in the BC economy grew 9.7 per cent.

Sector Dynamism: High Tech Sector Ins and Outs

Growth or decline in the number of firms is a valuable indicator of the health of a sector. However, the entry and exit rates that lie behind the net change can provide some valuable insights about the forces affecting the firms involved, particularly in comparison to other jurisdictions.

Figure 2 gives a framework for analysing entry and exit rates. In this framework, the Canadian average for the high technology sector is taken as a standard, and set as the centre point of lines drawn as crosshairs. The four resulting quadrants each describe an environment that characterizes the dynamism (or lack of it) of high technology firms.

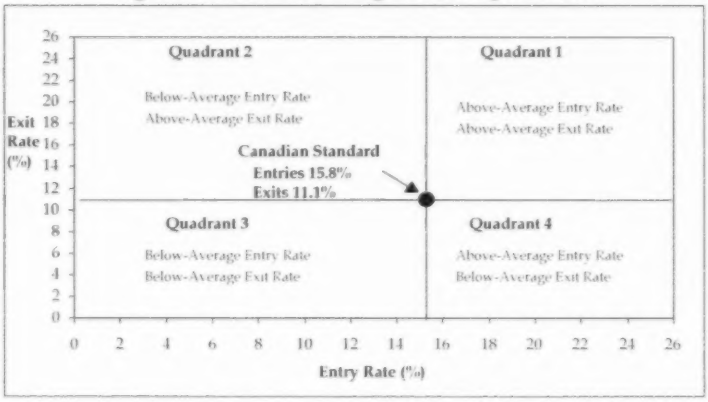
For example, Quadrant 1 describes a dynamic situation in which there are relatively many startup firms (perhaps stemming from a healthy innovation culture, availability of venture capital, etc.) but also relatively many exits. The exits could result simply from the abundance of ideas being floated by the startups, or they could be symptomatic of working capital or skilled labour shortages, inexperienced management, etc. Quadrant 3, on the other hand, would seem to represent a stagnant sector, with barriers to entry or a poor innovation culture, coupled with established, often large firms that do not fail but perhaps lag in innovation.

Quadrant 2 describes a declining sector, lacking in startups and with many failures, while in quadrant 4 growth is rapid, with many entries and few failures. Quadrants 2 and 4 do not presently describe any Canadian economies.

It should be stressed that the quadrant position of an industry is only suggestive of whether it is working well or not, and what may be required to improve performance. More detailed research at the firm level would always be required to confirm any diagnosis.

Using the framework to describe the high tech sectors of British Columbia, Alberta, and Ontario

Figure 2. Characterizing Sector Dynamism



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reveals only Alberta firmly in quadrant 1. Ontario is straddling the border between quadrant 2 and quadrant 3, with somewhat below average entry rates, and average exit rates. British Columbia, however, has above average exit rates and average entry rates. Our exit rates, nonetheless, are no higher than those in Alberta. The challenge, rather, is in fostering new entries in British Columbia.

The picture of sector dynamism sharpens considerably when focussed on the distinction between high tech services and high tech manufacturing. Figure 3 reveals that the manufacturing portion of the high tech sector is located in quadrant 3, regardless of province, and that similarly all high tech service sectors are in quadrant 1. This implies that entry and exit rates are at least as sensitive to specific lines of business as they are to the jurisdiction which they are located.

Survival

The comparisons of entry and exit rates presented above are one way to describe the environment faced by individual firms in the high technology sector. The exit rates, for example, show the annual probability of business exits. However, the underlying data also supports the tracking of firms over more extended periods of time. Consequently, direct measurement of years of survival is also possible. Survival, in this study, is defined as the number of firms that were in existence in 1991 and that continue to be identified each year until 1995.

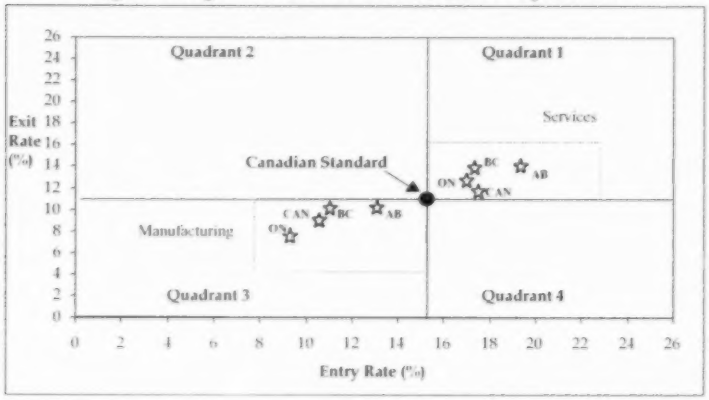
The finding of this tracking is that 60 per cent of the firms in the BC economy existing in 1991 remained in business after five years. The chance of survival in the high technology sector was over four points better, at 64.4 per cent. It was also observed that firms in the BC economy and the high technology sector cease to exist in a relatively constant pattern. That is, there is no abnormally dan-gerous year among the first five. By the same token, the risk of going out of business does not lessen in any of the first five years.

Both the high technology service and manufacturing sectors have higher survival rates than the average for the BC economy, but it is the manufacturing sector that appears to be the most stable, with a 69 per cent chance of survival after five years. Among all industries within the high technology sector, - *Computer and Related Industries* appears to be an anomaly in that it has the lowest survival rate. Earlier findings indicate that this industry group experienced the highest rate of growth. With a survival rate of just 54.6 per cent, it may be that competition is also the fiercest in this industry group.

Employment Performance

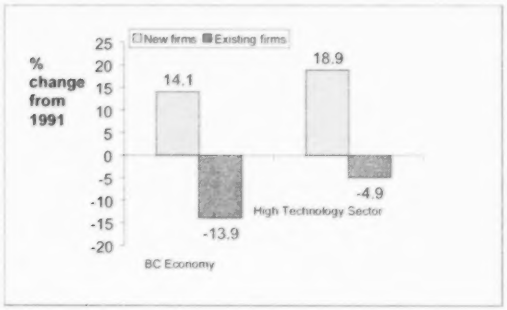
The number of high technology firms in BC is growing at almost twice the rate of firms in the province overall. However, the employment effects of this are even more pronounced. In the most recent BC Stats' high technology sector report, "*Profile of the British Columbia High Technology Sector, 1999*," employment growth was reported at over 35 per cent between 1991 and 1995, compared to 11 per cent for the overall BC economy. That is, high technology sector employment grew at more than three times the rate for the economy overall.

Figure 3. High Tech Service Sectors Lead in Dynamism



Of the high technology firms in existence in 1991, the start year of this study, we have found (as indicated in the Survival section) that over 64 per cent survived until 1995, and recorded employment gains over the period. However, the 35 per cent that did not survive caused the sector to suffer some employment losses. These losses were such that by 1995 the employment of the cohort of 1991 firms had dropped by 4.9 per cent. This situation was also reflected in the economy overall, with firms existing in 1991 recording a 13.9 per cent drop in employment by 1995. For the economy overall, this reflected not only losses due to the exit of firms, but also declines in employment among firms that survived to 1995.

Figure 4. New Firms Are Responsible for All Net Job Creation, 1992-95



The situation is much different for new firms (those that entered between 1992 and 1995). In the high technology sector, new firms brought over 6,600 full time equivalent jobs at the time of their birth. They went on to expand on average, creating an additional 2,480 jobs by 1995. Including a modest loss of about 600 jobs due to firm exits, the startup firms accounted for about 8,500 new jobs over the period. In this way, new firms can be seen as responsible for all the net job creation in the high technology sector.

Conclusion

In British Columbia, as in other jurisdictions, the high technology sector outperforms the general economy in growth rates of number of firms, in firm survival over time, and in the rate of job creation. However, the rate of new entries is lower than the BC average. Since new entries are the primary source of new job creation, the various possible barriers to entry require further investigation. Since entry rates are significantly lower in high technology manufacturing, this sub-sector should receive special attention.

British Columbia's high technology entry rates are slightly above the Canadian average. They are lower than those in Alberta, and higher than those in Ontario. Further comparisons of the innovation and entrepreneurial environment in these provinces may also yield useful insights for fostering growth in high technology locally.

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Infoline

March 10, 2000

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BC at a glance . . .

POPULATION (thousands)	Oct 1/99	% change on one year ago
BC	4,037.2	0.8
Canada	30,572.5	0.8
GDP and INCOME		
(BC - at market prices)	1998	% change on one year ago
Gross Domestic Product (GDP) *($ millions)*	110,948	-0.2
GDP *($ 1992 millions)*	99,708	0.2
GDP *($ 1992 per Capita)*	24,908	-0.8
Personal Disposable Income *($ 1992 per Capita)*	15,969	-1.6
TRADE ($ millions)		
Manufacturing Shipments (seas. adj.) Dec	3,286	10.4
Merchandise Exports (raw) Dec	2,369	6.7
Retail Sales (seasonally adjusted) Dec	2,933	6.6
CONSUMER PRICE INDEX		% change on
(all items - 1992=100)	Jan '00	one year ago
BC	111.3	1.3
Canada	111.4	2.3
LABOUR FORCE (thousands)		% change on
(seasonally adjusted)	Feb '00	one year ago
Labour Force - BC	2,098	1.0
Employed - BC	1,950	2.4
Unemployed - BC	148	-14.1
		Feb '99
Unemployment Rate - BC *(percent)*	7.0	8.3
Unemployment Rate - Canada *(percent)*	6.8	7.9
INTEREST RATES (percent)	Mar 10/00	Mar 10/99
Prime Business Rate	6.75	6.75
Conventional Mortgages - 1 year	7.60	6.60
- 5 year	8.35	7.15
US/CANADA EXCHANGE RATE	Mar 10/00	Mar 10/99
(avg. noon spot rate) Cdn $	1.4589	1.5239
US $ *(reciprocal of the closing rate)*	0.6865	0.6569
AVERAGE WEEKLY WAGE RATE		% change on
(industrial aggregate - dollars)	Jan '00	one year ago
BC	627.97	0.8
Canada	607.04	3.8

SOURCES:

Population, Gross Domestic Product, Trade, Prices, Labour Force, Wage Rate } Statistics Canada

Interest Rates, Exchange Rates: Bank of Canada Weekly Financial Statistics

For latest Weekly Financial Statistics see www.bank-banque-canada.ca/english/wfsgen.htm

Web site changes

We've made some very obvious changes to the look of our site at the topmost levels. We've also made some not so obvious changes to content, navigation and interface. Both sets of changes are designed to respond to user feedback. We are hoping you experience greater ease in moving around the site, and finding the tables and papers that you remember seeing . . . but just where were they?

Please let us know whether you like the changes and how we could further improve the site. Keep in mind there are four main ways to find items on our site:

Search a top banner tab for keyword searching.

Subjects a top banner tab for a broad subject area listing. A link to our **detailed list** of subjects appears in the lower right portion of the Subjects screen.

Detailed Subject List found as above or under **Programs & Services** on our home. This is a jumping off point for most tables covering a broad range of subjects on our site.

Regions . a top banner tab for locating data with a geographic dimension. Where possible the view detailed maps link will take to to a map that you can click on to see detailed regional maps.

Released this week by BC STATS

- No subscription releases

Next week

- Labour Force Statistics, February 2000

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